App. No. 09/682.073

In the Claims:

1-8 (cancelled)

9. (new) A method of source routing to implement device-to-device communications across a hybrid distributed device control network, said method comprising: a) originating a packet at a source node; b) having the packet consists of sections including;

i)a header;

ii)a network path; and

iii)data.

c) encapsulating the packet in a protocol-specific packet used by the subnetwork of the source node; d) passing said protocol-specific packet to the first destination router in the network path;

e) having the router decapsulate the protocol-specific packet;

f) increment the next path destination index counter by one;

g) using the next path destination index counter to point to the next path destination address;

h) encapsulating the packet in a protocol-specific packet used by the next destination subnetwork; i) passing said protocol-specific packet to the next destination router in the network path;

4

App. No. 09/682,073

j) repeating the previous five steps until the packet reaches the final destination node;

k) identifying the packet as a broadcast packet; and l) encapsulating the broadcast packet in a protocol-specific packet used by the destination subnetwork; and m) passing said broadcast packet to the nodes on the destination subnetwork

l) having the acknowledgement packet consist of sections including;

i)a header; ii)a network path; and iii)data.

m) creating the acknowledgement network path by inversing the network path of the packet;

n) encapsulating the acknowledgement packet in a protocol-specific packet used by the subnetwork of the destination node; o) passing said protocol-specific packet to the first destination router in the acknowledgement network path;

p) having the router decapsulate the protocol-specific packet;

q) increment the next path destination index counter by one;

r) using the next path destination index counter to point to the next path destination address;

App. No. 09/682,073

s) encapsulating the acknowledgement packet in a protocol-specific packet used by the

destination address"s subnetwork; t) passing said protocol-specific packet to the next

destination router in the network path; and

u) repeating the previous five steps until the acknowledgement packet reaches the

source node.

10. (new) The method according to claim 9 wherein said encapsulation packet has an

encapsulation header that contains a destination address.

11. (new) The method according to claim 9 wherein a packet is being broadcast to all

the nodes in a subnetwork in which the additional steps of:

12. (new) The method according to claim 9 wherein said packet header section contains

the following fields:

a)Packet Type;

b)Packet ID;

c)Quality of Service;

d)Network Path Length;

6

PAGE 6/17 * RCVD AT 8/11/2004 9:10:26 PM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/2 * DNIS:8729306 * CSID:17409675143 * DURATION (mm-ss):03-28

App. No. 09/682.073

e)Data Pointer;

f)Network Path Pointer Table;

g)Network Path Destination Index; and

h)Multicast Pointer.

13. (new) The method according to claim 9 wherein said Network Path section contains the following fields:

a)Network Type; and

b)Network Address.

14. (new) The method according to claim 9 wherein said Data section contains the following fields:

a)Data Length; and

b)Data Segment.